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NEW RECORD OF PLANTS FOR INDIA FROM TRIPURA—1

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ABSTRACT

The paper records for the first time the occurrence of *Psidium guineense* Sw. in India from Tripura. It further records, probably for the first time, the transition from stamens to petals in the family *Myrtaceae*. This plant is exotic in and about Agartala, Tripura. It does not seem to be spreading. How and when the immigrant entered Tripura could not be traced. The paper contains a detailed description of the species and the distinguishing characters by which it differs from *Psidium guajava* Linn.

INTRODUCTION

The genus *Psidium* Linn. contains about 100 species (Lawrence, 1951) most of which are native in tropical and subtropical America. Duthie in Hooker's Flora of British India (1875) described only one species, *Psidium guajava* Linn. of this genus as occurring in India as a cultivated or exotic plant. Calder *et al.* (1926) and Razi (1959) did not record any other species of this genus in the first and the second list respectively of the "species and genera of Indian phanerogams not included in J. D. Hooker's Flora of British India". A search into literature published thereafter fails to find any reference to the occurrence of any other species in India.

This paper records for the first time the occurrence of *Psidium guineense* Sw. (plate I) in India from Tripura. Originally a native of New Guinea, it has been growing wild at Agartala for a long time and has been naturalised there. No clue could be traced as to how and when it immigrated into Tripura. The late P. M. Deb Burman, the then Curator of Indian Botanic Garden, Calcutta, and a native of Tripura, who made a collection of Tripura plants for the said herbarium in the second decade of this century, identified this plant as *Psidium cujeoillous* Burm. (*Deb Burman* 308, preserved in the Herbarium of Indian Botanic Garden, Sibpur, West Bengal) which is the same as *Psidium guajava* Linn. It escaped the notice of Dr. K. Biswas (1958) who visited Tripura in 1943. In the preliminary study, the author took it for a variety of the cultivated species. Soon the detailed study of the flowering shoot convinced him that it is not a variety of *Psidium guajava* Linn. cultivated in India. But as the original descriptions and the typical herbarium specimens of different species of *Psidium* Linn. were not available to the author, he considered it worth while to send some materials to the Director, Royal Botanic Gardens, Kew, who very kindly determined the specific status of the specimen.

DESCRIPTION

Psidium guineense Swartz, Fl. Ind. Occ. 2: 881, 1791; DC. Prod. 3: 235, 1828.

Habit mostly an under-shrub, sometimes a shrub and rarely a small tree, evergreen, terete, pubescent-villous. *Bark* not exfoliating in thin flakes as in *Psidium guajava* Linn. *Leaves* petiolate with petiole up to 1 cm. long, opposite, decussate, 6-15 × 4-8 cm., ovate, oblong or elliptic-oblong, entire or distantly serrulate, slightly recurved, obtuse or acute, glabrous above and ferruginous-tomentose below, pinnate reticulate; lateral nerves 6-10 on each side, alternate. *Peduncles* 1-3-flowered, axillary, about 2 cm. long. *Flowers* regular, polypetalous, pentamerous, epigynous, with a pair of opposite bracteoles. *Calyx* entire in bud, irregularly 5-lobed in flower, lower portion adnate to the ovary. *Corolla* of free petals, 5 or more with modification of some of the stamens to petals, white, broad, imbricate, alternating with sepals. *Stamens* free, 120-130 in number; filaments up to 1.25 cm. long, flattened; anthers adnate, introrse, 4-loculed, dehiscing longitudinally; sometimes some of the stamens undergo modification to petals with one anther lobe or with only traces of anther lobes; this phenomenon of transition from stamens to petals in wild plants is probably the first record for this family. *Ovary* inferior, two- or more-celled, with many ovules in each cell; *stigma* dumbbell-shaped; *style* one. *Fruit* a berry, pyriform, about 2 cm. in diam., containing numerous seeds with hard testa. *Embryo* curved.

Flowers and fruits almost throughout the year. *Deb* 9, 548, 594, 814. A set of the specimens is preserved in the Department of Botany, M.B.B. College, Agartala, Tripura; another set of the same collection numbers is preserved in the Regional Herbarium of the Eastern Circle, Botanical Survey of India, Shillong.

Pollen (Deb & Chakraborty, 1960) granular, cream-coloured, radiosymmetric, subprolate, colporate, triangular in polar view, flattened polar surface is arched with more or less rounded apices, small; polar view 20.8-25.08μ. Equatorial view 20.8-25.08$\mu \times$ 14.63-

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*This piece of investigation was carried out by the author while working as the Senior Lecturer-in-charge, Department of Botany, M.B.B. College, Agartala, Tripura.

18.51μ. Exine rather thin in thickness, surface smooth. Furrows 3, 8-10 × 1μ, gradually narrowing towards the pore membrane, smooth. Pores 3, one in the middle of each furrow, roughly circular, diam. 1.5μ, membrane smooth, sometimes protruding up to 4.5μ beyond the general outline of the exine. Intine medium, thick over the pore. It differs from the pollen grains of *Psidium guajava* Linn. in general size and in polar view of the apices.

DISTRIBUTION AND ECOLOGY

In Tripura this plant is localised in the Sadar Sub-Division at Agartala (College tillah, Jhaguria mura, Kunjaban etc.), Jogendra nagar, Ananda nagar, Bishal ghar, Konaban, Ranir Bazar, East Noabadi, Jirania and Tibrubari. It grows in sandy gravelly and ferruginous soil forming societies, pure or in association with coppice shoots of *Microcos paniculata* Linn., *Holarrhena antidysenterica* Wall., *Careya arborea* Roxb., *Glycosmis arborea* (Roxb.) Corr., *Clerodendrum infortunatum* Gaertn., *Melastoma malabathricum* Linn., *Cassia tora* Linn., *Croton bonplandianum* Bail., *Scoparia dulcis* Linn., *Jatropha gossypifolia* Linn. and others.

Natural regeneration is very common, but the plant does not seem to be spreading. Due to the influence of different biotic factors, the plant usually does not attain the normal size of a small tree.

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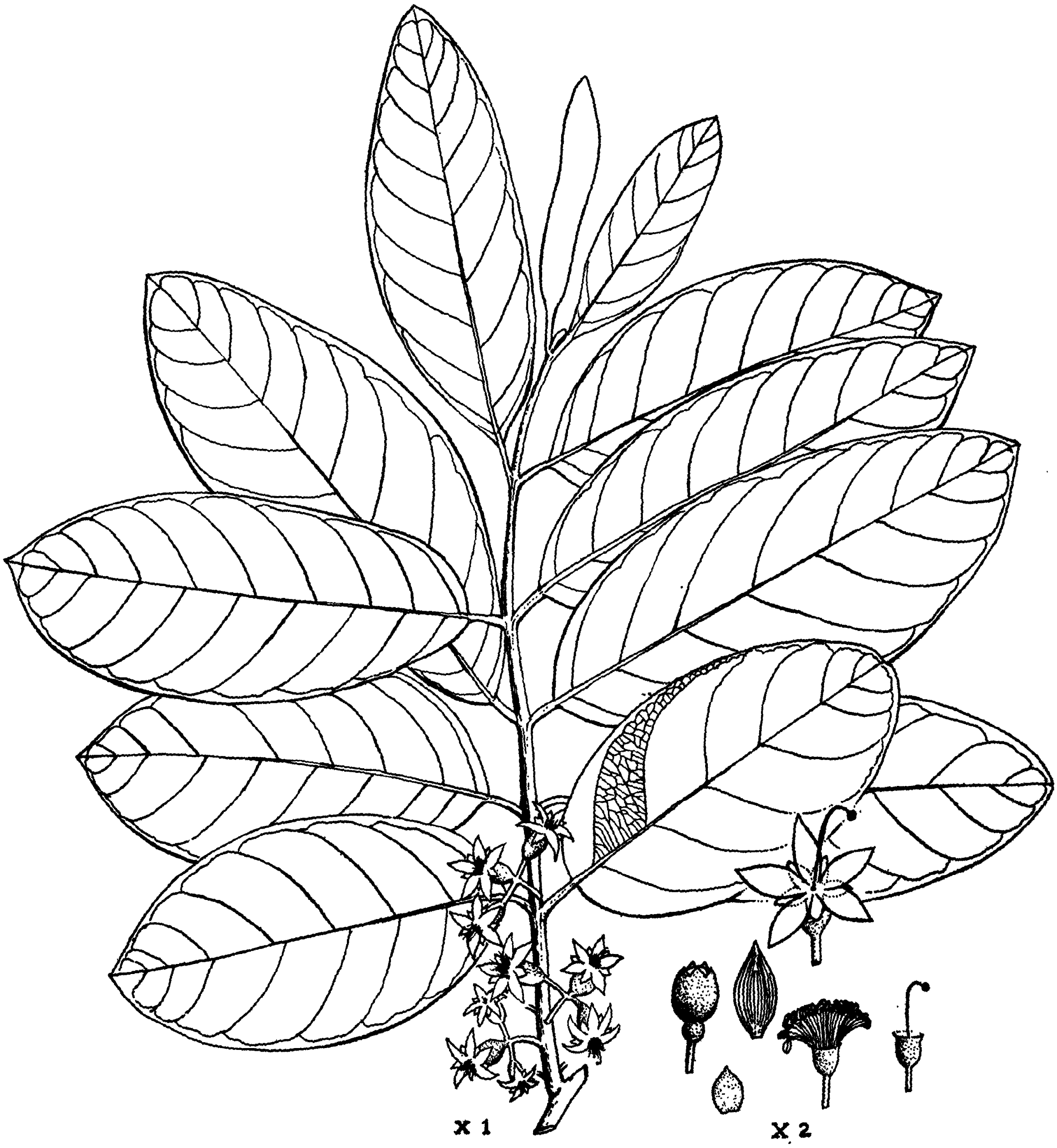

Plate 1: *Psidium guineense* Sw.